

WHAT IS CLAIMED IS:

1. An on-press developable heat-sensitive lithographic printing plate precursor comprising:

a support having a water-wettable surface; and

5 an image forming layer,

wherein the image forming layer comprises microcapsules containing a lipophilic compound and a leuco dye which forms a color by an action of an acid, an acid generator capable of generating an acid on heat application, and a light-heat
10 converting substance.

2. An on-press developable heat-sensitive lithographic printing plate precursor comprising:

a support having a water-wettable surface; and

15 an image forming layer,

wherein the image forming layer comprises microcapsules containing a lipophilic compound and a dye which reduces the maximum absorption intensity in a visible region by an action of an acid, an acid generator capable of generating an acid
20 on heat application, and a light-heat converting substance.

3. The lithographic printing plate precursor according to claim 1, wherein the acid generator is water-soluble,
25 present outside the microcapsules, and isolated from the

microencapsulated leuco dye.

4. The lithographic printing plate precursor according to claim 2, wherein the acid generator is water-soluble,
5 present outside the microcapsules, and isolated from the microencapsulated dye.

5. The lithographic printing plate precursor according to claim 1, wherein an amount of the leuco dye is 0.5 to 20%
10 by weight based on solids content of the image forming layer.

6. The lithographic printing plate precursor according to claim 1, wherein an amount of the leuco dye is 1 to 10% by weight based on solids content of the image forming layer.
15

7. The lithographic printing plate precursor according to claim 2, wherein an amount of the leuco dye is 0.5 to 20% by weight based on solids content of the image forming layer.

20 8. The lithographic printing plate precursor according to claim 2, wherein an amount of the leuco dye is 1 to 10% by weight based on solids content of the image forming layer.

9. The lithographic printing plate precursor according to claim 1, wherein the microcapsules have an average particle
25

size of 0.01 to 3.0 μm .

10. The lithographic printing plate precursor according to claim 2, wherein the microcapsules have an average particle
5 size of 0.01 to 3.0 μm .

11. The lithographic printing plate precursor according to claim 1, wherein an amount of the microcapsules in the image forming layer is 50% by weight or more on solid basis based
10 on the solids content of the image forming layer.

12. The lithographic printing plate precursor according to claim 2, wherein an amount of the microcapsules in the image forming layer is 50% by weight or more on solid basis based
15 on the solids content of the image forming layer.

13. The lithographic printing plate precursor according to claim 1, wherein the lipophilic compound is a compound comprising a heat-reactive functional group.
20

14. The lithographic printing plate precursor according to claim 2, wherein the lipophilic compound is a compound comprising a heat-reactive functional group.

25 15. The lithographic printing plate precursor according

to claim 13, wherein the heat-reactive functional group is capable of undergoing radical polymerization or cation polymerization.

5 16. The lithographic printing plate precursor according to claim 14, wherein the heat-reactive functional group is capable of undergoing radical polymerization or cation polymerization.

10 17. The lithographic printing plate precursor according to claim 13, wherein the heat-reactive functional group is at least one group selected from the group consisting of a vinyl group, an acryloyl group, a methacryloyl group, an allyl group, a vinyloxy group and an epoxy group.

15 18. The lithographic printing plate precursor according to claim 14, wherein the heat-reactive functional group is at least one group selected from the group consisting of a vinyl group, an acryloyl group, a methacryloyl group, an allyl group,
20 a vinyloxy group and an epoxy group.